

# Monitoring Results: Stream Restoration in the Magothy Watershed

ANNE ARUNDEL COUNTY, MARYLAND

## PROBLEM

Eroding stream banks and flooding along Cypress Creek were allowing excess nutrients and sediment to reach the Chesapeake Bay.

## SOLUTION

The stream was restored in June 2012-February 2013 to reduce excess nutrients and sediment by implementing Regenerative Stormwater Conveyance (RSC) systems in the headwaters and hybrid wetland complex/stream restoration on the North Branch of Cypress Creek for \$2.87 million.

## RESULTS\*

The RSC systems and wetland/stream restoration are reducing excess nitrogen, phosphorus, and sediment reaching the Chesapeake Bay.

## BEFORE RESTORATION IN 2012



## AFTER RESTORATION



	<b>Erosion Reduction</b> <i>(Average Annual % Change)</i>	<b>Erosion Reduction</b> <i>(Annual lbs)</i>	<b>Cost per Pound</b> <i>(**Based on an estimated 15 yr project life)</i>
<b>Suspended Sediments</b>	<b>33% ↓</b>	 or 42,886 lbs	<b>\$4.46</b>
<b>Phosphorus</b>	<b>34% ↓</b>	 or 349 lbs	<b>\$548</b>
<b>Nitrogen</b>	<b>39% ↓</b>	 or 1,485 lbs	<b>\$129</b>

**Chesapeake and Atlantic Coastal Bays Trust Fund - Focused funding, measureable results, and maximum restoration benefits**

\*Williams, M. et al. 2017. Stream Restoration Performance and Its Contribution to the Chesapeake Bay TMDL: Challenges Posed by Climate Change in Urban Areas. Estuaries and Coasts 40:1227-1246

\*\*Project must be inspected for credit renewal every 5 years

